

# Successful Treatment of Anorexia Nervosa in a 10-year-old Boy with Risperidone Long-acting Injection

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Although the effectiveness of medication in the treatment of anorexia nervosa is uncertain, atypical antipsychotics such as olanzapine and risperidone have been used empirically for decades, we describe the case of a 10-year-old boy with anorexia nervosa in whom remarkable improvement was seen following the administration of risperidone or risperidone long-acting injection and deterioration when these agents were ceased. Because this is, to the best of our knowledge, the first report describing the usefulness of risperidone long-acting injection for adolescent anorexia nervosa.

**KEY WORDS:** Anorexia nervosa; Eating disorders; Risperidone long-acting injection; Child.

## INTRODUCTION

Although the effectiveness of medication in the treatment of anorexia nervosa is uncertain, atypical antipsychotics such as olanzapine and risperidone have been used empirically for decades. We describe a case of anorexia nervosa that showed remarkable improvement with the use of risperidone or risperidone long-acting injection (RLAI) and deterioration when these agents were ceased. As far as we know, this is the first case to demonstrate the usefulness of RLAI for adolescent anorexia nervosa.

## CASE

The patient was a 10-year-old boy with a 1-year history of a restrictive eating disorder with agitation during meals. He had no noteworthy developmental history. He showed body image distortion and obsessive fears of being fat, but he did not exhibit depressive mood, hallucinations, or delusions. Physical examination was normal with the exception of emaciation. Laboratory investigations, echocardiography, head computed tomography (CT), chest CT, and abdominal CT demonstrated no abnormality. In

September 2009, he was hospitalized because he was refusing all meals and his weight had fallen from 26 kg to 22.8 kg (71% of ideal body weight [IBW] for his height of 134.2 cm). We consequently started enteral feeding. He gained 7 kg and maintained his weight; however, he became agitated during enteral feeding and continued to refuse to eat. We started olanzapine for the body image distortion and agitation during meals but discontinued it in December 2009 because of over-sedation.

In April 2010, we started risperidone 1 mg/day. Thereafter, the agitation during enteral feeding and his complaints based on body image distortion diminished. After 1 month (6 months after hospitalization), he resumed meals. No side effects of risperidone were observed and his growth was good in the month after it was started. However, we stopped risperidone in June 2010 at his mother's request. One month after doing so, the patient's abnormal eating behaviors deteriorated and he stopped eating meals. In July 2010, we resumed risperidone 1 mg/day and his abnormal eating behaviors diminished. One month later, he resumed meals. No side effects were observed and his growth was good during the next two months. However, after this period he refused risperidone because he believed it was making him fat. His abnormal eating behaviors deteriorated again, and after one month he again stopped eating. In October 2010, we started RLAI 12.5 mg/2 weeks, as he refused to take risperidone orally but accepted the injection. His abnormal eating behaviors again diminished, and one month lat-

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er, he again resumed eating. During the next 5 months, he gained 5 kg to reach 33 kg (94% of IBW) and his abnormal eating behaviors disappeared. In May 2011, he was discharged from hospital at 96% of IBW (height 138.4 cm, weight 33.7 kg). In September 2011, RLAI was tapered and discontinued, but he was continuing to eat meals at last follow-up in February 2013.

## DISCUSSION

A few case reports have showed risperidone to be beneficial in adolescents with anorexia nervosa;<sup>1,2)</sup> however, a double-blind placebo-controlled pilot study in adolescents with anorexia nervosa did not demonstrate such benefits.<sup>3)</sup> The effectiveness of risperidone in adolescents with anorexia nervosa is accordingly uncertain. The present adolescent case appears to demonstrate that risperidone had considerable effectiveness, because the pa-

tient's abnormal eating behaviors repeatedly showed improvement on risperidone and deterioration off the medication. Risperidone may therefore be useful for some adolescent patients with anorexia nervosa, and RLAI may be beneficial for those who refuse food and medication orally.

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